

551,388

## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
14 October 2004 (14.10.2004)

PCT

(10) International Publication Number  
**WO 2004/088869 A1**

(51) International Patent Classification<sup>7</sup>: **H04B 3/54, 3/56**

(21) International Application Number:  
PCT/FI2004/000183

(22) International Filing Date: 30 March 2004 (30.03.2004)

(25) Filing Language: Finnish

(26) Publication Language: English

(30) Priority Data:  
20030470 31 March 2003 (31.03.2003) FI

CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant and

(72) Inventor: ROMUNEN, Jorma, Kullervo [FI/FI]; Kauri-inpelto T 170, FI-33880 Lempäälä (FI).

(74) Agent: NIEMINEN, Taisto; Patenttitoimisto T Nieminen Oy, Kehräsaari B, FI-33200 Tampere (FI).

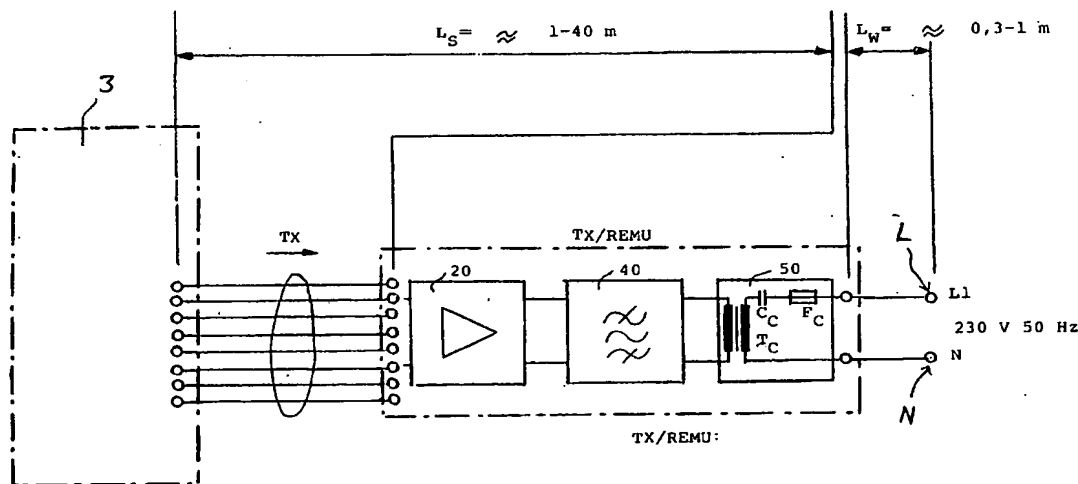
**Published:**

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: A TRANSMITTER WITH A REMOTE UNIT IN AN ELECTRIC NET DATA TRANSMISSION SYSTEM



(57) Abstract: A transmitter for sending a data transmission signal to an electric net, whereby the apparatus comprises signal-shaping and adjustment devices (3) and connecting devices (50) including necessary accessories for connection to the electric net, signal amplifiers (20) and a connecting cable between the transmitter and the connecting point of the electric net, as for instance 230 V, 50 Hz phase rail (L) and zero rail (N) or a wall outlet as connecting points. The apparatus is divided into two or several parts, at least a first part (3) and a second part (TX/REMU), whereby second part (TX/REMU) includes at least connecting a unit (50) for connection to the electric net and a connecting cable and for connecting said second part to the electric net, whereby the length ( $L_W$ ) of connecting cable is under 5 m.

WO 2004/088869 A1